2

AMENDMENTS TO THE CLAIMS:

1. (Currently amended) A lithium battery comprising:

a power-generating element comprising a positive electrode, a negative electrode and a separator, at least a part of said power-generating element comprising a gel electrolyte comprising: at least

a polymer comprising a polymerized polyfunctional (meth) acrylate monomer, said gel electrolyte comprising said polymerized polyfunctional (meth) acrylate monomer in a range from 5% to 30% by weight; and

a liquid electrolyte, wherein a concentration of lithium salt in said liquid electrolyte being in a range is from greater than 2 to 4 mols per liter \(\ell \) of the liquid electrolyte.

- 2. (Currently amended) The lithium battery claimed in claim 1, wherein said gel electrolyte comprises said polymerized polyfunctional (meth) acrylate monomer in a range from 10% to 25% by weight the weight fraction of the polymer in said gel electrolyte is from 5 to 30% by weight based on the sum of the weight of said polymer and said liquid electrolyte.
- 3. (Currently amended) The lithium battery claimed in claim 1, wherein said polyfunctional (meth) acrylate monomer comprises one of a bifunctional (meth) acrylate, a trifunctional (meth) acrylate, and a tetrafunctional (meth) acrylate gel electrolyte comprises a hardened mixture of a liquid electrolyte and a monomer having at least two polymerizable functional groups in its molecular chain.
- 4. (Original) The lithium battery claimed in claim 1, wherein said lithium salt comprises LiBF₄.
- 5. (Previously presented) The lithium battery claimed in claim 1, wherein said liquid electrolyte comprises an organic solvent comprising γ butyrolactone in an amount of not smaller

3

than 50% by weight.

- 6. (Currently amended) The lithium battery claimed in claim 2, wherein said <u>polyfunctional</u> (meth) acrylate monomer comprises a bifunctional (meth) acrylate monomer gel electrolyte comprises a hardened mixture of a liquid electrolyte and a monomer having at least two polymerizable functional group in its molecular chain.
- 7. (Original) The lithium battery claimed in claim 2, wherein said lithium salt comprises LiBF₄.
- 8. (Original) The lithium battery claimed in claim 3, wherein said lithium salt comprises LiBF₄.
- 9. (Previously presented) The lithium battery claimed in claim 2, wherein said liquid electrolyte comprises an organic solvent comprising γ -butyrolactone in an amount of not smaller than 50% by weight.
- 10. (Previously presented) The lithium battery claimed in claim 3, wherein said liquid electrolyte comprises an organic solvent comprising γ -butyrolactone in an amount of not smaller than 50% by weight.
- 11. (Previously presented) The lithium battery claimed in claim 4, wherein said liquid electrolyte comprises an organic solvent comprising γ -butyrolactone in an amount of not smaller than 50% by weight.
- 12. (Currently amended) The lithium battery claimed in claim 1, wherein said liquid electrolyte comprises from greater than 2 to 3 mols per liter of said lithium salt.

4

- 13. (Previously presented) The lithium battery claimed in claim 1, wherein said liquid electrolyte comprises a plurality of lithium salts.
- 14. (Previously presented) The lithium battery claimed in claim 1, wherein said liquid electrolyte comprises an organic solvent comprising at least one of γ -butyrolactone, propylene carbonate and ethylene carbonate.
- 15. (Previously presented) The lithium battery claimed in claim 1, wherein said lithium salt comprises an inorganic anion comprising at least one of PF₆, ClO₄, AsF₆, and SCN.
- 16. (Previously presented) The lithium battery claimed in claim 1, wherein said lithium salt comprises an organic anion.
- 17. (Currently amended) The lithium battery claimed in claim 3, wherein said <u>polyfunctional</u> (meth) acrylate monomer comprises one of a bifunctional (meth) acrylate, a trifunctional (meth) acrylate, and a tetrafunctional (meth) acrylate.
- 18. (Currently amended) The lithium battery claimed in claim 1, wherein said polyfunctional (meth) acrylate monomer comprises a trifunctional (meth) acrylate monomer concentration of said lithium salt in said liquid electrolyte is at least 2.2 mols per ℓ of the liquid electrolyte, and wherein said lithium battery comprises a discharge capacity of at least 4.0 mAh.
- 19. (Currently amended) A lithium battery comprising:

 positive and negative electrodes; and
 a separator formed between said positive and negative electrodes,
 wherein at least one of said positive electrode, said negative electrode and said separator
 comprises a gel electrolyte comprising:

a polymer comprising a polymerized polyfunctional (meth) acrylate monomer,

5

said gel electrolyte comprising said polymerized polyfunctional (meth) acrylate monomer in a range from 5% to 30% by weight; and

a liquid electrolyte, wherein said liquid electrolyte comprising from comprises greater than 2 to 4 mols per liter of said lithium salt.

20. (Currently amended) A method of fabricating a lithium battery, said method comprising:

forming positive and negative electrodes; and

forming a separator between said positive and negative electrodes,

wherein at least one of said positive electrode, said negative electrode and said separator comprises a gel electrolyte comprising:

a polymer comprising a polymerized polyfunctional (meth) acrylate monomer, said gel electrolyte comprising said polymerized polyfunctional (meth) acrylate monomer in a range from 5% to 30% by weight and

a liquid electrolyte, wherein said liquid electrolyte comprises comprising from greater than 2 to 4 mols per liter of said lithium salt.